ASSAM POWER GENERATION CORPORATION LIMITED

OFFICE OF THE CHIEF GENERAL MANAGER (HYDRO & CIVIL), BIJULEE BHAWAN, GUWAHATI-781001



TENDER DOCUMENT FOR

NIT NO: - Tender Notice No. 24 of 2019-20 of CGM (H & C) dtd: 19.02.2020

NAME OF THE WORK: - Repairing and modification of office building at Amguri Solar Power Project (70 MW).

February -2020

Issued to:	
	Name:-
	Address: –
Issued by:	

Price: - - 1,000/- (Non Refundable)

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CHAPTER-I

TENDER NOTICE



ASSAM POWER GENERATION CORPORATION LIMITED

Registered Office: Bijulee Bhawan, 2nd floor, Paltanbazar, Guwahati-781 001, Assam. Email: egmh2010/a yahoo.in, Tele-Fax: 0361-2739522.

Chief General Manager (Hydro & Civil)

Date: 19/02/2020

Notice No. APGCL/CGM (H&C)/24 of 2019-20

The Chief General Manager (Hydro & Civil), APGCL, Bijulee Bhawan, Paltanbazar, Guwahati-1 invites sealed tenders in prescribed format from bonafide, experienced and financially sound contractors/firms for the following work:

SI.		Tendered	Earnest	Time of	
No.	Name of work	amount (Rs.) (including GST)	General (Rs.)	SC/ST/OBC (Rs.)	completion
1	Repairing and modification of office building at Amguri Solar Power Project (70 MW)".	Rs. 15,97,184.00	Rs. 31,944.00	, ,	45 days

The bid document may be obtained from the office of the Chief General Manager (Hydro & Civil), APGCL on written request to the Chief General Manager (Hydro & Civil), APGCL during office hours on all working days w.e.f. 20/02/2020 to 25/02/2020 on payment (non-refundable) of Rs. 1000.00 (Rupees One Thousand only) in the shape of Demand Draft only from Nationalized/Schedule Bank in favour of Deputy General Manager (F & A), APGCL. The bid document may also be downloaded from the website www.apgcl.org.

The cost of bid is to be deposited separately with the downloaded tender along with Earnest Money. The tenders will be received up to 12.00 hours of 25/02/2020 and will be opened at 13.00 hours on the same day in presence of the tenderers or their authorized representatives. **The bidders are to submit their bids on item rate basis.** The Chief General Manager (Hydro & Civil), APGCL is not bound to accept the lowest rate and reserves the right to accept or reject any or all tenders without assigning any reason thereof. Any addendum/corrigendum/extension etc in respect of this tender shall be issued on APGCL's website: www.apgcl.org

Chief General Manager (Hydro & Civil),

Date: 19/02/2020

Memo No. APGCL/CGM (H)/W/2010-11/303/Pt-II(A)/26(a)

C.c. to: -

 The Managing Director, APGCL, Bijulee Bhawan, Paltanbazar, Guwahati-781 001, for favour of kind information.

 The Chief General Manager (Gen), APGCL, Bijulee Bhawan, Paltanbazar, Guwahati-781 001, for information.

 The Chief General Manager (F & A), APGCL, Bijulee Bhawan, Paltanbazar, Guwahati-781 001, for information.

 The General Manager, Design (Civil), APGCL, Narengi, Guwahati – 781 026 for information and wide circulation.

 The Assistant General Manager (C), APCD, ATPP, APGCL, Amguri, Dist.-Sivsagar for information and necessary action and wide circulation.

6) The P.R.O., APDCL, Bijulee Bhawan, Paltanbazar, Guwahati-781 001, for information with a request to publish the notice in one issue of Local Dailies in Regional and English Language on or before 20/02/2020.

7) Relevant File.

CHAPTER-II

TERMINOLOGY

1

- 1.01 APGCL wherever used in this document shall mean Assam Power Generation Corporation Limited incorporated vide The Companies Act 1961 in exercise of Powers conferred under the Act including subsequent amendments, if any. APGCL is a successor company of ASEB.
- 1.02 CGM (H&C) or owner or purchaser or project authority wherever used in this document shall mean the officer holding the post of the Chief General Manager (Hydro & Civil) APGCL, Guwahati (Assam), who or his authorized representative will exercise authority on behalf of the Department in respect of the Tender and the works specified herein.
- 1.03 Engineer-in-Charge/or engineer shall mean the Officer holding the charge of the Departmental post of General Manager/ Assistant General Manager (Civil) pertaining to supervision of works specified in this document
- 1.04 The term 'Contractor' wherever used in this document shall mean the individual/firm or company who shall have entered into a contract agreement with the owner or the project authority, undertaking on his behalf to carry out the works in full or in part as may be specified in contract documents, and shall include in the case of an individual/ his heirs, administrators and permitted assignees, in case of a firm, the partners of the said firm, their respective heirs, executors, administrators and permitted assignees, and in case of a Company its successors and permitted assignees.
- 1.05 Contract documents shall mean and comprise the following documents and shall be the basis of agreement between the owner and the contractor for carrying out the works in accordance with the terms and conditions, specifications, drawings and directions contained in the said documents
 - a) Bid documents duly filled in respect of rates, process & signed, the tender forms properly filled in, signed and dated by the contractor & duly submitted
 - b) Contractor's original bid proposal and subsequent correspondences relating to clarifications and negotiations, if any, prior to award of the contract.
 - c) Equipment specifications and drawings, so far as applicable
 - d) Approved agreement forms duly signed, dated and sealed by the contractor and the owner as specified in the said forms
- 1.06 'Equipments' and 'Plants' shall mean and include all sorts of machineries and accessories, apparatus, instruments, components manufactured articles and parts etc. to be supplied or provided by the contractor under the terms of the contract, unless otherwise specified
- 1.07 The 'Works' shall unless be repugnant to such description shall be construed and taken to mean the works contracted, or by virtue of the contract agreement, to be executed whether temporary or permanent and whether original, altered, substituted or additional
- 1.08 The expression 'Specifications' wherever used in this document shall mean all the pertinent terms and stipulations furnished herein in respect of the work or part thereof and/or indicated in the drawings appended hereto and to be issued for construction and shall have reference also to other relevant terms and stipulations not furnished herein, but as far as applicable

CHAPTER-III

INSTRUCTION FOR BIDDERS AND SPECIAL CONDITIONS

NIT NO: - Tender Notice No. 24 of 2019-20 of CGM (H & C) dtd: 19.02.2020

BID INVITATION FOR: - Repairing and modification of office building at Amguri Solar Power

Project (70 MW).

EARNEST MONEY DEPOSIT:

Rs. 31,944.00 (for General)

Rs. 15,972.00 (for SC/ST/OBC) (For Individual only)

In the shape of Demand Draft only duly pledged in favour of the Deputy General Manager (F&A), APGCL, Guwahati-781001

1. **DUE DATE AND CLOSING TIME**

The bid will be received up to 12.00 p.m. on 25/02/2020. The opening time of the bids will be at 01.00 p.m. on the same day and the venue will be the office of the Chief General Manager (Hydro & Civil), APGCL. Bidders or their authorized representatives will make it convenient to attend the bid opening on time.

2. TIME OF COMPLETION OF WORK

The stipulated time of completion of the work is **45** (forty five) days from the date of handing over the site. No time extension shall be granted to the contractor irrespective of size and volume of the awarded work.

3. <u>BID-GUARANTEE OR EARNEST MONEY DEPOSIT: (E.M.)</u>

- 3.1 Every bid or tender shall be accompanied by a deposit of E.M for an amount indicated in the Tender Notice pertaining to the work (ordinarily equivalent to 2% of the estimated value of work, unless otherwise specified in the Notice), in the form of an acceptable **Demand Draft only from a Nationalized/Schedule Bank pledged in favour of the Deputy General Manager (F & A), APGCL**, Guwahati. Irregular tender is liable to be rejected.
- 3.2 The E.M. as mentioned above will be returned to the respective unsuccessful bidder soon after the award of the contract. The E.M. will be retained towards the contract security deposit in the case of selected bidder or bidders in whose favour the contract is awarded. The APGCL will not entertain any claim for release of the E.M. during pendency in selection of contractors for awarding the contract. The APGCL will not pay any interest on the E.M. deposit.
- 3.3 The E.M. is liable to be forfeited in the absolute discretion of the CGM (H&C), APGCL, if a selected bidder revokes or causes to withdraw his offer / tender before the expiry of its validity or fails after the contract is awarded to him to execute the 'Contract agreement' with the APGCL described herein after (so far as applicable) or to commence the work within the period as notified in the work order.

4. PERFORMANCE –GUARANTEE OR SECURITY DEPOSIT (S.D.)

- 4.1 The security to be taken for due performance of the contract in terms of the 'contract agreement' will be a deduction of 10% (ten percent) from every ad-interim payment made on account of works performed, until the sum of these deductions and E.M. together becomes equal to 10 (ten) percent of the total executed value.
- 4.2 Such S.D. shall be forfeited or appropriated by the CGM (H&C), APGCL, Bijulee Bhawan, Guwahati under authority of the owner in his discretion towards any loss, damage etc. that may be sustained by the APGCL as a result of breach of any terms, conditions of the contract by the contractor, notwithstanding other remedies open to the APGCL under the terms of the contract or law
- 4.3 In the event of contractor's Security Deposit being appropriated towards loss, damage etc, the contractor shall forthwith recoup the amount to restore the Security Deposit to the full current value within 30 (thirty) days from the date of intimation.

4.4 Subject to the provisions mentioned above and the provisions of guarantee period of one year, the Security Deposit will be returned to the contractor on the due and satisfactory performance of the contract and after all claims of the APGCL shall have been settled. The APGCL will not pay any interest on the amount of Security Deposit of Performance Guarantee.

5. GOODS AND SERVICE TAX / INCOME TAX CERTIFICATE (PAN / GST):

- 5.1 The offered rates and / or prices for the work shall include all taxes, duties, forest royalties, monopolies etc. as may be applicable on material and labour during the tenure of the contract. There will be no reimbursement for any increase or levy of new taxes, duties etc. on materials utilized for this work or equipments furnished / supplied for completing the work or for machineries, equipments, tools and tackle, fuel and lubricants etc. used in connection with the performance of the work, unless otherwise specified or qualified by the bidder in his bid. If, however, any tax or duty is levied by the Govt. or statutory body on the finished work (after complete installation and / or delivery), such tax or duty will be to the account of the APGCL.
- 5.2 The contractors must have a valid GST Registration No. and should submit copy of GST Certificate and attested copy of PAN Card.
- 5.3 Caste certificate must be produced where necessary.

6. <u>BIDDER'S QUALIFICATIONS:</u>

- 6.1 The Bidder should submit a list and description of similar or comparable works previously executed by him successfully during last five consecutive financial years indicating the individual volume and contract price along with the name and address of the respective owner / authority.
- 6.2 All prospective bidders are hereby notified that, before any bid submitted in response to this invitation is considered for award, the CGM (H&C), APGCL may require the bidder to submit a further statement of facts in detail as to the previous experience of the bidder and financial resource available with him for performing the contemplated work. The CGM (H&C), APGCL expressly reserves the right to reject any bid or which the facts as to business, financial and other resources or business experience, compared with the work bid upon, justify such rejection.
- 6.3 The Bidder should submit valid Labour License Certificate.
- 6.4 Civil Engineering firms / contractors with adequate experience must complete similar works having total value not less than 40% of tendered amount during last the last 5 (five) years. Preference will be given to the contractors who have previously executed repairing/ construction works pertaining to Building. They must submit such completion certificate with the tender.
- 6.5 Cost over run shall not be accepted.
- 6.6 Contractors should be financially sound to invest the amount and should submit necessary evidence on this account. Average Annual turnover during the last 3 (three) years ending 31st March of the previous financial year, should be at least 40% of the tendered amount.
- 6.7 It should be ensured that the contractors shall have Provident Fund Code No. It will be ascertained that all the workers engaged by the contractor directly should be registered for Employees' Provident Fund (EPF) and due contribution have been credited into their account.

7. BIDDER SHOULD EXAMINE & UNDERSTAND

7.1 All prospective bidders are required to thoroughly study and carefully examine all the terms and conditions, instructions, drawing & specifications pertaining to the work and visit the field of work to fully satisfy and acquaint themselves about the nature and location of work, the configuration of the ground. The spring level, the surface conditions, quality and quantity of materials required and their availability the type of equipments and facilities needed preliminary to and during the execution of the work and local conditions which may affect the work or cost thereof. Failure to do so will be at the bidder's risk.

8. SUBMISSION OF TENDER

- 8.1 Bidders are to quote their rates against each item in clear money (Rupees) value per unit of work (inclusive of all taxes) in the prescribed format.
- 8.2 The rates are to be quoted on item rate basis. The rates are to be quoted in figures.
- 8.3 The rates quoted by the bidders will be inclusive of all taxes, royalties and other statutory levies as applicable.

- 8.4 Bidders should note that unusually low rates not feasible for execution may not be technically accepted.
- 8.5 Bidders should note that during the time of execution of work, any item not covered by the items of work (Annex A) if required to be done as per decision of the CGM (H&C)/ Engineer-in Charge of work, they have to execute such work/works as supplementary item of works, rates will be analyzed by the department as per reasonable market price but in any case of dispute for rate of supplementary item/items, the decision of CGM (H&C) will be final and conclusive.
- 8.6 The quoted rates will be firm for entire period of completion of the work. No price escalation on any component will be admissible.
- 8.7 Firms submitting tender should enclose a certified copy of the Firm's constitution and a certified copy of Power of Attorney authorizing a person to operate the tender and contract and should furnish full address of the partners and the persons holding power of attorney on behalf of the firm
- 8.8 Information regarding litigation, current or during the last five years, in which the Bidder is involved with APGCL/AEGCL/APDCL, must be furnished, if any in the prescribed format(at Chapter VII).
- 8.9 Every page of the tender document must be duly signed by the contractor/firm participating in the bidding process.

9. AWARD OF CONTRACT

- 9.1 The contract will be awarded to that responsible bidder whose bid, confirming to the schedule conditions of contract and specifications will be most advantageous to the Department, price and other factors considered. An award mailed (or otherwise furnished) to the successful bidder within the time for acceptance specified in the bid will result in a binding contract without further action by either party. The CGM (H&C), APGCL does not bind itself to accept the lowest bid or any bid. As the interest of the Department may require, the right is reserved to reject any or all bids and to waive any minor informality or irregularity in bids received without assigning any reason thereof. Bid which are incomplete or which contain undesirable conditions are liable to rejection.
- 9.2 APGCL will try to make timely payment of bills, but on unavoidable circumstances cannot guarantee timely payment of bills, for which no interest on the payable amount will be entertained.

10. CONTRACT AGREEMENT

- 10.1 The 'Contract agreement' (or Tender Agreement) for the works will be drawn up with the selected bidder/bidders within **7 (Seven)** working days of issue of the work order and the contract documents will comprise as described herein before.
- The conditions of the F-2 form shall form part and parcel of the agreement. However wherever there is any contradiction or variation between the conditions of the F-2 form, the terms and conditions specified elsewhere in this document, the later will be treated as superseding the former. Terms and conditions shall be as per F-2 Form of agreement and has to follow accordingly. In the Form-F-2 all the designations appearing as Executive Engineer/Sub divisional Officer shall be read as Chief General Manager (Hydro & Civil), Assam Power Generation Corporation Limited (herein after called as C.G.M (H&C), APGCL).
- 10.3 In a case where the selected bidder fails to commence the work as shall be notified in the work order or fails to execute the tender agreement with the CGM (H&C), APGCL as stipulated herein before; the CGM (H&C), APGCL reserves the right to claim loss, damage etc. and take appropriate action under the terms of this document or law including forfeiture of E.M.

11. TOOLS & PLANTS

11.1 The APGCL does not ordinarily furnish any tools & tackle, plants and equipments or such facilities for carrying out the work by the contractor (excluding hypothecation). The contractor shall arrange and maintain the equipments required for implementation of work all throughout the period of the contract.

12. MATERIALS & LABOUR

- 12.1 All materials (this includes without limitation raw materials, parts, components etc.) and labourers required for carrying out the work shall be arranged and furnished by the contractor all throughout the tenure of the contract and strictly conform to relevant IS Code (latest revision).
- The intending tenderers should inspect the prospective sources of collection of raw materials and fully satisfy him about the quality of materials, availability of materials, lead, and mode of transportation. The Department shall not consider, after acceptance of the contract, to pay any extra charge for lead or any other reasons, in case the contractor found later on, to have misjudged, the quality/quantity of availability of such materials from the source of collection.
- 12.3 APGCL shall not issue any construction materials such as cement, reinforcement bar, or any other materials.
- 12.4 In connection with the performance of work throughout the tenure of the contract, the engagement of labour and payment therefore by the contractor shall conform to the statute, the pertinent law or act of the Central & State Govts, as well as rules, regulations and orders of the local authorities or statuary bodies, as may be in force from time to time.
- 12.5 The materials procured for the work by the contractor shall be placed at site properly for inspection of Engineer-in charge before utilization. Any defecting materials should be replaced immediately for which no extra charge will be payable to contractor.

13. CHANGES IN QUANTITY AND ITEM

- 13.1 The authority may at any time, by a written order make changes within the general scope of the contract, in any one or more of the following
 - Quantity of any item
 - ii) Alteration or omission of any item
 - iii) Addition of any item
 - iv) Alteration in drawings, designs or specifications

If any such change causes an increase or decrease in the cost of or the time required for performance of the contract, an equitable adjustment shall be made in the contract price or time schedule or both and the contract shall be modified in writing accordingly. Any claim by the contractor for adjustment under this clause must be asserted within 30 days from the date of receipt by the contractor of the notification of change: PROVIDED HOWEVER, that the authority if decides that the facts justify such action, may receive and act upon any such claim asserted at any time prior to final payment under the contract. Failure to agree to any adjustment shall be a dispute concerning a question of fact within the meaning of the disputes mentioned herein after. However nothing in this clause shall excuse the contractor from proceeding with the contract as changed.

14. <u>INSPECTION</u>

- 14.1 All works and all supplies (this term includes without limitation raw materials, parts, components, intermediate assemblies and end products) under the contract shall be subject to inspection and test by the CGM (Hydro & Civil), APGCL or his authorized person to the extent practicable at all times and places including the period of construction or manufacture and in any event prior to final acceptance.
- 14.2 In case any work or part thereof or/and any supply is found defective in material or workmanship or otherwise not in conformity with the specifications or drawings or requirements of the contract, the CGM (Hydro & Civil), APGCL shall have the right either to reject them or to require their correction, as directed by the department.
- 14.3 The inspection and test by the CGM (Hydro & Civil), APGCL or his authorized person of any work or any supplies does not relieve the contractor from any responsibility regarding defects or other failures to meet the contract requirements which may be discovered prior to final acceptance. Except as otherwise provided in this contract final acceptance shall be conclusive except as regards latent defects, fraud or such gross mistakes as amount to fraud.
- 14.4 The contractor shall provide and maintain an inspection system acceptable to the CGM (Hydro & Civil), APGCL covering the works and/or supplies hereunder. Records of all inspection works by the contractor shall be kept complete and available to the CGM (Hydro & Civil), APGCL during the performance of this contract.

15. <u>DEFAULT</u>

15.1 The contractor shall not be liable for any excess cost of any failure to perform the contract arises out of causes beyond the control and without the fault or negligence of the contractor (such as FORCE MAJEURE) PROVIDED THAT the contractor shall notify the authority in writing of the cause of any such delay, within fifteen (15) days from the beginning thereof or within such further period as the authority shall grant for the giving of such notice.

16. <u>LIQUIDITY DAMAGE</u>

16.1 The liquidated damages shall be payable for delay in completion of the work @ 1.00% (one percent) of the contract prices per week. The liquidated damages so payable shall not exceed 10% (ten percent) of the contract prices.

17. TERMS OF PAYMENT

17.1 Bills shall be entertained on the basis of Actual measurement of completed works as per standard procedure. Payment shall be made only after completion of work subject to the availability of fund.

18. CONTRACTUAL FAILURE:

18.1 In the event of Contractual Failure of any respect on the part of the successful bidder, APGCL shall be entitled to forfeit the EMD or any money received from the bidder and may take appropriate action under the terms of the Contract or Law.

19. SETTLEMENT OF DISPUTE:

19.1 In the event of any dispute or differences at any time arising between the parties relating to work or any other clause or any content of the right and liabilities of the parties or other matters specified therein or with reference to anything arising out of the such dispute or differences shall be endeavored to be resolved by mutual negotiation. If, however, such negotiation is in fructuous, the dispute should be finally settled through Arbitration and Conciliation Act 1996 by three arbitrators appointed in accordance with the said Act. The decision of the arbitrator shall be final & binding upon the parties and the expense of the arbitration shall be paid as may be determined by the arbitrator in accordance with provisions of Arbitration and Conciliation Act 1996. The arbitration proceedings shall be held in Guwahati.

20. TERMINATION:

20.1 APGCL may, by not less than 7 (seven) days written notice may terminate the contract, if the contractor: (i) fails to remedy a failure in the performance of his obligations, (ii) becomes insolvent or bankrupt, (iii) submit to APGCL statement which has a material effect on the rights, obligations or interest of APGCL and which the contractor knows to be false, (iv) as result of force majeure, if the whole work cannot be performed for a continuous period of 30 (thirty) days. (v) fails to take over the site within the stipulated time as mentioned in the work order issued to the successful bidder. APGCL shall make payment upon termination to contractor the services performed by the contractor to the entire satisfaction of APGCL prior to date of termination.

CHAPTER-IV

SAFETY ENGINEERING & SAFETY CODE

1. SAFETY ENGINEREING

Accident prevention shall be an essential part of the programme of the contractor for all operations involve in performance of the contract under this invitation in order to reduce the cost of construction measures in terms of:

- a. Human life sacrificed
- b. Temporary and permanent injuries to workers.
- c. Loss of materials resulting from accidents.
- d. Loss of damage to equipment.
- e. The cost of workman's compensation insurance.
- f. Loss of times due to accidents.

Suitable safety programme to be developed to cope with the particular hazards for each operations of the performance of the contract.

2. INSPECTION

To ensure effective enforcement of the rules and regulations relating to safety precautions, the arrangements made by the contractor shall be open to inspect by the Engineer-in-Charge or his representative.

3. COMPENSATION

No extra charges or additional compensation will be admissible to the contractor by the department for any work done to comply with the provisions of safety Engineering and Safety Code. The bid price of the contractor for various items shall include these incidental cost.

CHAPTER-V

CONTRACTOR'S CAMP

1. CAMP SITES

The contractor shall provide, maintain and operate under competent direction such camp facilities convenient to the site works under this contract as are necessary for housing, feeding and accommodation of his employees. The location, construction, operation and maintenance of such camps shall be subject to the approval of the Assistant General Manager/ Engineer in charge of the site.

2. USE OF LAND FOR CONSTRUCTION PURPOSES

Such land as may be available at work- site will be allowed to be used by the contractor for construction of his camps free of charge. However, development of clearances of the land will have to be done by the contractor at his own cost. The contractor will be responsible to clear and clean the site after completion of his works and handover the land to the Engineer-in-Charge. The contractor will be liable to pay compensation for any damages done to the land or neighboring area.

3. SANITATION IN CAMP SITE:

The temporary sanitation in the camp site should be properly maintained and hygienic so that pollution can be controlled and just before completion of the work site must be cleared properly.

CHAPTER-VI

DECLARATION

I / We hereby declare that I/we shall treat the tender documents and other records connected with the works as secret/confidential and shall not communicate information derived there from to any person other than person to whom I/We/am/are authorized to communicate the same or use the information to any manner prejudicial to the safety of the state.

Signature of the tenderer
Full Name
(In Block letters)
Address
Phone/ Mobile
Data:

CHAPTER-VII

<u>Declaration of Litigation</u>

Information on litigation history in which bidder is involved

Employer	Cause of Dispute	Amount involved	Remarks showing present
(APDCL/APGCL/AEGCL)			status

CHAPTER-VIII

Schedule of work:

To,

The Chief General Manager (Hydro & Civil), APGCL, Bijulee Bhawan Paltanbazar, Guwahati-1

Sub: "Repairing and modification of office building at Amguri Solar Power Project (70 MW)."

Ref: Your Tender Notice No.24 of 2019-20 of CGM (H&C) Dated: 19/02/2020 Dear Sir,

A. REPAIRING AND MODIFICATION OF OFFICE BUILDING AT AMGURI SOLAR POWER PROJECT (70 MW) (SANITARY)

Sl. N	DESCRIPTION	Quantit	Unit	Rate (Pa)(Inclusiv	Amount (Rs.) (Inclusive of
0		y		(Rs.)(Inclusiv e of all taxes)	(Inclusive of all taxes)
1	Providing fitting and fixing vitreous china pedestal type water closet (Anglo-Indian type W.C. pan 400mm high) of Hindware make, white colour, with POPULAR "P, Cat no. 20044 with seat and lead, CP brass hinges and rubber buffers, CI/MS brackets, 40mm dia flush band with fittings including painting of fittings and brackets. (Flushing Cistern to be paid separately)	3	Each		
2	Supplying, fitting and fixing PVC flushing cistern of Hindware, white colour, Sleek+ PVC cistern model with all internal fittings, with C.I. brackets including fitting and fixing standard size CP flush pipe, union clamps etc. compete as directed and specified (pipe will be measured separately).	3	Each		
3	Providing vitreous China wash basin(without pedestal) of Parryware brand, white colour, Star basin 550x400(Cat. No. C0450) model with CI/MS brackets, C.P. brass chain with plug, PVC waste pipe including painting of fittings and brackets, cutting and making good the wall	1	Each		

	1 1 (75)11 1			
	wherever required.(Pillar cock, stop			
	cocks, waste coupling are to be paid			
	separately)			
4	Providing fitting and fixing Mirror with	2	Each	
	plastic frame of size 500x400mm			
	complete as directed and specified.			
5	Supplying, fitting and fixing PVC			
	pipes of 6 Kg/cm2 (Supreme/Prince) or	12.00	Rm	
	other ISI approved including joining	12.00	Kili	
	,fitting and fixing with clamps etc. as			
	necessary complete at all levels			
	including below G.L as directed and			
	specified.			
	110mm dia			
6	Supplying, fitting and fixing PVC	30.00	Rm	
	pipes of 6 Kg/cm2 (Supreme/Prince) or			
	other ISI approved including joining			
	,fitting and fixing with clamps etc. as			
	necessary complete at all levels			
	including below G.L as directed and			
	specified.			
	75mm dia			
7	Supplying fitting and fixing 87.5			
	degree PVC bend with door of	13	Each	
	(Supreme/Prince) or other ISI approved	10	Zuen	
	including joining, fitting and fixing			
	etc. as necessary complete at all levels			
	including below G.L. as directed and			
	specified.			
	110 mm dia			
8				
0	Supplying fiting and fixing PVC	E	E a ala	
	single tee with door of	5	Each	
	(Supreme/Prince) or other ISI approved			
	including joining, fitting and fixing			
	etc. as necessary complete at all levels			
	including below G.L. as directed and			
	specified.			
	110 mm dia			
9	Supplying fitting and fixing PVC plain	_		
	tee of (Supreme/Prince) or other ISI	3	Each	
	approved including joining, fitting			
	and fixing etc. as necessary complete			
	at all levels including below G.L. as			
	directed and specified.			
	110 mm dia			
10	Supplying fitting and fixing PVC plain	6	Each	
	tee of (Supreme/Prince) or other ISI			
	approved including joining, fitting			
	and fixing etc. as necessary complete			
	at all levels including below G.L. as			

	directed and specified. 75 mm dia			
11	Supplying fitting and fixing 87.5 degree PVC bend of (Supreme/Prince) or other ISI approved including joining, fitting and fixing etc. as necessary complete at all levels including below G.L. as directed and specified.	2	Each	
12	Supplying fitting and fixing 87.5 degree PVC bend of (Supreme/Prince) or other ISI approved including joining, fitting and fixing etc. as necessary complete at all levels including below G.L. as directed and specified. 75 mm dia	2	Each	
13	Supplying fiting and fixing PVC 110mmx75mm reducing Tee of Supreme/Prince or other ISI approved including joining, fitting and fixing etc. as necessary complete at all levels including below G.L. as directed and specified.	2	Each	
14	110mm dia C.P. Grating	4	Each	
15	Construction of inspection pit inside measurement 450mm x450mm x 450mm x 450mm flush with 100mm diameter HCI/PVC pipes and cement concrete base in proportion 1:3:6 over flat brick soling, 12cm brick wall in cement mortar in proportion 1:4 finished with 13mm cement plaster in proportion 1:2 in side wall and floor. 450mm x450mm air tight C.I. inspection pit cover and frame complete including supplying of materials, necessary excavation of pit as directed.	4	Each	
16	Providing fitting and fixing PVC cowel of ISI make complete as directed and specified. 75 mm dia PVC cowl of ISI make	3	Each	
17	Providing fitting & fixing stainless steel kitchen sink of Parryware make Single Bowl with Drain Board (360x180) Flat Edge- Glossy (Cat. No. C8536) with CI/MS brackets, C.P.	1	Each	

10	brass chain with rubber plug, PVC waste pipe etc. complete including painting the fittings ,cutting &making good the walls wherever required. (Sink cock, stop cocks, waste coupling are to be paid separately		Each	
18	Providing fitting and fixing (600x600)mm 90mm thick C.I. Man hole cover and frame of 25 Kg. weight complete as directed and specified	3	Each	
19	Supplying fitting and fixing approved uPVC Pipes of different sizes, with all necessary 'R' brand or similar approved P.V.C. Fittings such as bend, tee, elbow, reducer, nipple, plug, long screw fitting, clamps etc. complete at all levels including below G.L. as directed and specified. (A)Exposed or in trenches SUPREME/ PRINCE/ SFMC BRAND or other equivalent approved brand (High pressure pipe Sch-40) 40mm dia	16.00	RM	
20	Supplying fitting and fixing approved uPVC Pipes of different sizes, with all necessary 'R' brand or similar approved P.V.C. Fittings such as bend, tee, elbow, reducer, nipple, plug, long screw fitting, clamps etc. complete at all levels including below G.L. as directed and specified. (B) Concealed by chiseling or breaking brick wall/ C.C. wall/ R.C.C. wall and making good to the damaged structure. SUPREME/ PRINCE / SFMC / FUSION BAND or other equivalent approved brand (High pressure pipe Sch-40) 20mm dia	30.00	RM	
10	40mm dia	10.00	RM	
18	Supplying, fitting and fixing chrome plated 15 mm dia angular stop-cock of Jaquar make as directed and specified. Continental / Clarion model with long thread	8	Each	

19	Supplying, fitting and fixing 15mm dia two way C.P. bib cock of Jaquar brand as directed and specified. Queen's collection model with wall flange	3	Each		
20	Supplying and fitting fixing C.P. pillar cock of 15mm dia of jaquar make as specified and directed, 'Continental' make.	3	Each		
21	Supplying fitting and fixing Chrome Plated (C.P.) sink cock of Jaquar brand as directed and specified. (G.I. & C.P pipes will be measured and paid separately) Continental/Clarion make with raised 'J' swinging spout	1	Each		
22	Providing fitting and fixing vitreous china flat back type lipped front urinal basin with standard flush pipe and CP brass spreader and brass unions, etc. complete including painting of fittings and brackets, cutting and making good the walls & floors where ever required. (A) Parryware make. (a) White (i) New magnum (Cat. No. C0575)	3	Each		
23	Hygienic faucet	3	Each		
24	Supplying and fitting brass ball valve Zoloto or equivalent I.S.I. Make as specified and directed. 40 mm dia	2	Each		
25	110mm dia C.P grating with hole for wash basin	4	Each		
26	C.P. extension nipple	10	Each		
				TOTAL(A)	

B. REPAIRING AND MODIFICATION OF OFFICE BUILDING AT AMGURI SOLAR POWER PROJECT (70 MW) CIVIL

Sl. No	DESCRIPTION	Quantity	Unit	Rate (Rs.) (Inclusive of all taxes)	Amount (Rs.) (Inclusive of all taxes)
1	Demolishing brickwork including stacking of serviceable materials and disposal of unserviceable materials as directed for all levels	6.93	Cum		
2	Demolishing CC floors of various thickness including top layer and base course and disposal of debris as directed for all levels.	160	Sqm		
3	Dismantling all types of ceiling, partition and wall lining including strengthening of existing structure with MS angles, MS holdfast and MS twist etc. for the purpose of demolishing and stacking the materials as directed by the department for all levels	146.25	Sqm		
4	Earthwork in excavation in ordinary soil for foundation trenches of walls, retaining walls, footings of column, steps, septic tank etc. including refilling (return filling) the quantity as necessary after completion of work, breaking clods in return filling, dressing, watering and ramming etc. and removal of surplus earth with all lead and lifts as directed and specified including bailing out water where necessary as directed and specified. (A) Upto a depth of 2.00 m below the existing G.L.	32.00	Cu.m.		
5	Earth / sand filling in plinth with predominantly non-plastic silt obtained by truck carriage (including loading and unloading) in layers not more than 150mm thick including necessary carriage, watering, ramming etc. complete as directed and specified including payment of land compensation, forest royalty, sales tax and other duties and taxes as may be necessary.	24.05	Cu.m.		

	701.1	2.50	G	
6	Plain cement concrete works with coarse	3.59	Cu.m.	
	aggregate of sizes 13mm to 32mm in			
	foundation bed for footing steps, walls,			
	brick works etc. as directed and specified			
	including dewatering if necessary, and			
	•			
	curing complete (shuttering where			
	necessary shall be measured and paid			
	separately) in proportion 1 cement: 3			
	sand: 6 coarse aggregate by volume			
	Providing and laying plain/reinforced		Cu.m.	
7		574	Cu.III.	
7	cement concrete of proportion 1:1.5:3	5.74		
	with coarse sand & 20mm downgraded			
	stone aggregate including dewatering if			
	necessary, and curing complete but			
	excluding cost of form work and			
	reinforcement for reinforced cement			
	concrete work (form work and			
	reinforcement will be measured and paid			
	separately)			
	Columns, pillars, posts, struts, suspended			
	floor, roof, landing, shelf and support,			
	balcony, lintel, sill band, beam, girder,			
	bressumer, cantilever, staircase (except			
	spiral staircase and landing) including			
	preparing the top surface and finishing of			
	nosing, from plinth level upto first floor			
	level.			
			g e	
	Providing form work of 25 mm thick		Sq.m.	
8	ordinary timber planking so as to give a	85.93		
	rough finish including centering,			
	shuttering, strutting and propping etc.,			
	height of propping and centering below			
	supporting floor to ceiling not exceeding			
	4.0M and removal of the same for in-situ			
	reinforced concrete and plain concrete			
	work in:			
	Sides and Soffits of Beams, slabs, lintels			
	and mullions			
0		51 25	Sam	
9	Providing flat brick soling in	51.35	Sq.m.	
	foundation and under floor with stone/			
	best quality picked jhama brick, sand			
	packed and laid to level and in panel			
	after preparing the subgrade as directed			
	including all labour and materials and if			
	necessary dewatering, complete.			
	Brick work in cement mortar of			
	proportion (1:5) with 1st class brick			
	including racking out joints and curing			
	complete as directed			
	complete as unected			

10	Providing flat brick soling in foundation and under floor with stone/ best quality picked jhama brick, sand packed and laid to level and in panel after preparing the subgrade as directed including all labour and materials and if necessary dewatering, complete. In sub-structure upto plinth level including dewatering if necessary	11.00	Cu.m.
11	1st class brick nogged wall in cement mortar including racking out joints and curing complete as directed in super structure above plinth up to 1st floor level (protruding M.S rod/Tor steel of column to be embedded in cement mortar and will be measured and paid separately). (A) 112mm thick brick wall. (a) In cement mortar in proportion 1:5.(1 cement:5 sand)	171.57	Sq.m.
12	Providing Antiskid vitrified Tiles of normal range of Somany or equivalent make of size 300 mm x 300 mm or above and thickness not less than 18 mm on floor over a cement mortar bed of 15mm thick in prop. 1:3 (1cement :3 coarse sand) including cutting where necessary and finished with flush pointing with Fix-A-Tile (Choksey/Sika/Pedelite/Rouf) / white cement slurry mixed with approved pigment to match shade of tiles, complete at all level as specified and directed. (Cement plastering to be measured and paid separately). (Coloured pigment should be in conformity with colour of tiles and as approved and directed by the Department)	10.83	Sq.m.
13	Providing polished vitrified wall tiles of approved quality and 300 mm x 600 mm size and above and thickness not less than 8 mm on dado and skirtings over cement mortar bed 10mm thick in prop. 1:3 (1cement: 3 coarse sand) including cutting where necessary and finished with flush pointing with Fix-A-Tile (Choksey/Sika/Pedelite/Rouf) / white cement slurry mixed with approved pigment to match shade of tiles, mixed	50.80	Sq.m.

14	with approved pigment to match the shade of the tiles, complete at all levels as specified and directed. (Coloured pigment should be in conformity with colour of tiles and as approved and directed by the Department) Kota-stone flooring with 18 mm thick slabs of 550 mm x 550 mm size over 20mm thick base of cement plaster 1:6 (1 cement: 6 coarse sand) laid over and jointed with grey cement slurry mixed with pigment to match the shade of the	64.40	Sq.m.	
	slab including rubbing and polishing complete.			
15	25 mm thick cement concrete topping 1:2:4 (1cement : 2 coarse sand : 4 coarse aggregate of 12 mm nominal size) finished with a floating coat of neat cement finish to be laid in panels including curing complete as directed.	82.83	Sq.m.	
16	65 mm thick cement concrete floor consisting of 50 mm under layer of cement concrete in prop. 1:3:6 (1cement : 3 coarse sand : 6 coarse aggregate of 25mm and down) and 15 mm thick wearing layer in cement concrete in prop. 1:1:2 (1cement :1 coarse sand : 2 coarse aggregate of size 10mm down) laid in panels and finished with a floating coat of neat cement finish (using cement slurry for bond @ 2.75 kg. per square metre of floor area) including curing etc. complete as directed.	35.50	Sq.m.	
17	Cement plaster skirting with cement mortar in prop. 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement including rounding of junctions with floor. (a) 15 mm thick	18.00	Sq.m.	
18	15 mm thick Cement plaster in proportion (1:5) in single coat on rough / fair side of single or half brick wall or concrete surfaces including arises, internal rounded angles, not exceeding 80mm girth and finished even and smooth including curing complete as directed. Wall plastering up to 1st floor level	370.67	Sq.m.	

19	Providing two coats of Birla White Wall	534.00	Sq.m.
17	Care Putty (Water Resistant White	2200	Sq.m.
	Cement based putty for concrete/ mortar		
	walls and ceiling both internal and		
	external) after removing all loosely		
	adhering material from the wall surface		
	with the help of emery stone, putty blade		
	or wire brush and moistening the wall		
	with sufficient quantity of clean water as		
	specified and directed by the department.		
	(Total thickness of two coats is		
	maximum 1.5mm)		
20	Applying one coat of cement primer of	534.00	Sq.m.
20	approved brand and manufacture on new	334.00	Sq.III.
	**		
	wall surface after throughly brooming		
	the surfaces free from mortar droppings		
	and other foreign matter and including		
	preparing the surface even and sand		
21	papered smooth.	534.00	Sam
21	Distempering with dry distemper of	334.00	S.q.m.
	approved brand and manufacture (two		
	coats) and of required shade on new wall		
	surface to give an even shade, after		
	thoroughly brushing the surface free		
	from mortar droppings and other foreign		
	matter and including preparing surface		
22	even and sand papered smooth.	142.00	G
22	Finishing wall with water proofing	143.00	Sq.m.
	cement paint of approved brand and		
	manufacture and of required shade on		
	new wall surface (two coats) to give an		
	even shade after thoroughly brooming		
	the surfaces to remove all dirt and		
22	remains of loose powdered materials.	277.00	G
23	Applying priming coat over new wood	277.00	Sq.m.
	and wood based surfaces over 100mm in		
	girth/width after and including preparing		
	the surface by thoroughly cleaning oil,		
	grease, dirt and other foreign matter,		
	sand papering and knotting.		
	(a). With ready mixed paint, Wood		
24	primer (pink) Pointing two costs (evaluding priming	277.00	Sam
24	Painting two coats (excluding priming	277.00	Sq.m.
	coat) on new wood and wood based		
	surface with enamel paint of approved		
	brand and manufacture (Asian paint/		
	Berger paint/ ICI paint/ J & N paint/		
	Nerolac) to give an even shade including		
	cleaning the surfaces of all dirt, dust and		
	other foreign matter sand papering and		

	stopping.			
	(i).Surfaces over 100mm in width or girth.			
	a). General purpose (Asian paint/ Berger			
	paint/ ICI paint/ J & N paint/ Nerolac)			
25		34.00	Sam	
23	Applying primary coat over new steel and other metal surface over 100m in	34.00	Sq.m.	
	width or girth after preparing the surface			
	by thoroughly cleaning oil, grease, dirt			
	and other foreign matter and scoured			
	with wire brushes, fine steels, wood			
26	scrapers and sand paper.	10.16	C	
26	Painting two coats (excluding priming	48.46	Sq.m.	
	coat) on new steel and other metal			
	surface with over 100mm in width			
	enamel paint of approved brand and			
	manufacture(Asian paint/ Berger paint/			
	ICI paint/ J & N paint/ Nerolac) to give			
	an even shade including cleaning the			
	surface of all dirt, dust and other foreign			
27	matter.	10.00	Cam	
27	Providing corrugated galvenised Iron	10.00	Sq.m.	
	sheet roofing of TATA SHAKTEE /			
	SAIL including fitting and fixing			
	necessary galvenised J or L hooks, bolts and nuts 8 mm dia with bitumen washer			
	25 mm dia x 3 mm thick and 1.6 mm			
	thick limpet washer complete excluding cost of roof truss, purlin etc. (Roof			
	trusses and purlin etc. to be measured			
	and paid separately).			
	(a) 0.55 mm thick			
28	Providing, fitting and fixing in position	180.00	Sq.m.	
20	false ceiling of 6mm thick Bison panel	180.00	Sq.m.	
	(cement bonded particle board) on			
	timber frame of 1st class local wood			
	(Hollock/ Bonsum/ Sundi) of 50mm x			
	50mm spaced at not more than 1.20m			
	apart, fixed to the wall at the end with			
	necessary nails, wood screws, hooks,			
	bolts etc. including painting (one coat			
	primer and two coats of painting) as			
	necessary complete as directed by the			
	Department for all levels.			
	(a) Both sides commercial			
29	Providing, fitting and fixing M.S. Plain	1200.00	Kg	
2)	grill of required pattern for windows/	1200.00	115	
	clerestory windows/ opening and steel			
	fabricated door in verandah with M.S.			
	flats and square bars at required spacing			
	Times and square sure at required spacing			 <u> </u>

	in frame all round and fioxed to brickwork / RCC or PCC members.		
30	Providing wood work in frame (chowkaths) of doors, windows, clerestory windows and other similar works wrought, framed and fixed in position in contact with C.C or brick masonry wall including supplying, fitting and fixing with M.S. hold fast (40mmx3mmx250mm) as per design embedded in cement concrete block in proportion 1:2:4 and with two coats of kiricide oiling to the timber faces in contact with C.C and masonry as directed and specified. (a) With 1st class timber (Bonsum/Sundi)	0.29	Cum
31	Providing, fitting and fixing fully glazed window with sash bars including oxidized M.S butt hinges (75mmx 60mmx3.15mm) 2nos.on each leaf and 3 nos. on single leaf (glass panes to be measured and paid separately) A) With Holock/Gamari/Bonsum wood. (i) 40mm thick	4.62	S.q.m
32	Providing and fixing clear sheet glass bedded in putty and fixed with/without wooden bidding including necessary cutting and glass to be required sized(payment for wooden bead shall be made separately) (2). Area of glass panes exceeding 0.15m2 but not exceeding 0.52m2. (a). 5.00mm thick.	8.20	S.q.m
33	Supplying, fitting and fixing in position reinforcement bars conforming to relevant I.S. Code for R.C.C. work/ R.B. walling including straightening, cleaning, cutting and bending to proper shapes and length as per details, supplying and binding with 20G annealed black wire and placing in position with proper blocks, supports, chairs, spacers etc. complete (upto 1st floor level). Other ISI approved TMT reinforcement bar upto first floor	7.30	Qtl.
34	Supplying, fitting and fixing in position reinforcement bars conforming to	1.50	Qtl.

	relevant I.S. Code for R.C.C. work/ R.B. walling including straightening, cleaning, cutting and bending to proper shapes and length as per details, supplying and binding with 20G annealed black wire and placing in position with proper blocks, supports, chairs, spacers etc. complete (upto 1st floor level). ISI approved Mild steel reinforcement bar upto first floor			
35	Structural steel work in single sections including cutting, hoisting, fixing in position and applying a priming coat of red lead paint (up to 4.6m height) from plinth level including drilling holes, supplying, fitting and fixing with bolts and nuts or welding, if necessary as directed. a) In M.S. angles, channels, Tees etc.	4.49	Qtl.	
36	Bamboo slit walling in timber frame with bamboo slit fitted in to the grooves of the timber frame and stiffened by means of double bamboo slits 25mm wide and not less than 6mm thick spaced at intervals of not more than 400mm apart one slit attached on each side and tied together by means of cane slit/galvd tying wire including 20mm thick cement plaster in prop 1 cement: 6 fine sand on both sides in two coats with curing etc complete (measurement for timber frame shall be measured and paid separately.) Supplying, fitting, fixing anodised	12.00	Sq.m.	
,	aluminium fittings of approved make, reasonably smooth, free from sharp edges and corners, flaws and other defects and with counter sunk holes for screws including necessary aluminium screws etc. complete.(anodised to bright natural matt & satin finished) 250 mm x 16 mm Sliding door bolts	24	Each	
38	Supplying, fitting, fixing anodised aluminium fittings of approved make, reasonably smooth, free from sharp edges and corners, flaws and other defects and with counter sunk holes for screws including necessary aluminium screws etc. complete.(anodised to bright natural matt & satin finished)	124	Each	

	250 mm x 12 mm Tower bolts			
39	Supplying, fitting, fixing anodised aluminium fittings of approved make, reasonably smooth, free from sharp edges and corners, flaws and other defects and with counter sunk holes for screws including necessary aluminium screws etc. complete.(anodised to bright natural matt & satin finished) 100 mm Door handles	82	Each	
40	Supplying, fitting, fixing anodised aluminium fittings of approved make, reasonably smooth, free from sharp edges and corners, flaws and other defects and with counter sunk holes for screws including necessary aluminium screws etc. complete.(anodised to bright natural matt & satin finished) Butt hinge 100 mm x 63 mm x 3.2 mm	205	Pair	
41	Supplying, fitting, fixing anodised aluminium fittings of approved make, resonably smooth, free from sharp edges and corners, flaws and other defects and with counter sunk holes for screws including necessary aluminium screws etc. complete.(anodised to bright natural matt & satin finished) Door stopper with rubber stopper	14	Each	
42	Providing barge board of size 200mm x 20mm with 1st class local Hollock/Bonsum timber including fitting and fixing with necessary wood screws etc. complete.	50.00	R.m.	
43	Repairing, fitting and fixing of existing wood works (i) Chowkaths of doors and windows	39.00	R.m.	
44	Repairing, fitting and fixing of existing wood works (i) Door and window shutters	39.83	S.q.m	
		<u> </u>	Total (B)	

C. REPAIRING AND MODIFICATION OF OFFICE BUILDING AT AMGURI SOLAR POWER PROJECT (70 MW) ELECTRICAL

Sl. No	DESCRIPTION	Quantity	Unit	Rate (Rs.) (Inclusive of all taxes)	Amount (Rs.) (Inclusive of all taxes)
1	Wiring for light/fan/call bell point with 2x1.5 sq. mm. P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed conduit wiring system with 20mm dia 2mm thick / heavy rigid PVC IS: 9537 Part - III conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) including 6 Amp flush type switch/ bell push (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.) GI/ MS switch board (ISI marked) with phenolic laminated sheet cover ,ceiling rose (Anchor penta /Gold medal /Kolor kany.Kom/Havells or equivalent make as approved by the Deptt.) etc. complete				
	Short point up to 3.00 metre. length.	36	Each		
	Medium point up to 6.00 metre. Length.	17	Each		
	Long point up to 10.00 metre. Length.	6	Each		

2	Wiring for 5 pin 6 amp plug with 1.5 sq	10	Each	
	mm P.V.C. insulated single core			
	unsheathed industrial (Multistrand) cable			
	FR conforming to IS-694: 1990 with			
	flexible bright annealed electrolytic			
	copper conductor for voltage grade up to			
	1100 volts (Finolex /RR Kabel /Nicco /			
	Anchor or Equivalent Make as approved			
	by the Deptt.) including 5 pin 6 amp			
	socket outlet (Anchor penta /Gold medal			
	/Kolor kany.Kom/Havells or equivalent			
	make as approved by the Deptt.)make)			
	and 6 amp flush type switch (Anchor			
	penta /Gold medal /Kolor			
	kany.Kom/Havells or equivalent make as			
	approved by the Deptt.)make) earthing			
	the 3rd pin of the socket as required on			
	the switch board in surface/ recessed			
	P.V.C. conduit wiring system. When			
	fitted on same board of light and fan.			
3	Wiring for 5/6 pin 16 amp plug with 4 sq			
	mm P.V.C. insulated single core			
	unsheathed industrial (Multistrand) cable			
	FR conforming to IS-694: 1990 with			
	flexible bright annealed electrolytic			
	copper conductor for voltage grade up to			
	1100 volts (Finolex /RR Kabel /Nicco /			
	Anchor or Equivalent Make as approved			
	by the Deptt.) in surface/recessed			
	conduit wiring system including and			
	fixing 5/6 pin 16 amp flush type plug			
	socket outlets and 16 Amp flush type			
	switch (Anchor penta /Gold medal			
	/Kolor kany.Kom/Havells or equivalent			
	make as approved by the Deptt.), GI/MS			
	switch board(I.S.I marked) with phenolic			
	laminated earth cover including earth	10	T1-	
	continuity with 2.5 sq mm cable to third	10	Each	
	pin of the plug socket as required			
	complete with 20mm da 2mm			
	thick/heavy ISI marked IS 9537 PART-			
	III rigid PVC conduit (Berlia/AKG/			
	Short point upto 3.00 metre length			

	T.			1	
4	Wiring for drawing sub-main line with P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed PVC 20 mm. dia. 2mm thick/ heavy ISI marked IS: 9537 PART - III rigid PVC conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) wiring system. With 2 x 2.5 sq. mm. + earth continuity with 1x1.5 sq. mm. cable in 40 mm. dia.	184.00	Meter		
	2mm thick/ heavy rigid PVC IS: 9537				
	Part - III conduit.				
	Wiring for drawing sub-main line with P.V.C. insulated single core unsheathed industrial (Multistrand) cable FR conforming to IS-694: 1990 with flexible bright annealed electrolytic copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed PVC 20 mm. dia. 2mm thick/ heavy ISI marked IS: 9537 PART - III rigid PVC conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) wiring system. With 2x 4 sq. mm. + earth continuity with 1x2.5 sq. mm. cable in 40 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537	141.10	Meter		
	Part - III conduit.				

5	Wiring for circuit wiring with P.V.C. insulated single core unsheathed industrial flexible cable conforming to IS-694: 1990 with flexible bright annealed copper conductor for voltage grade up to 1100 volts (Finolex /RR Kabel /Nicco / Anchor or Equivalent Make as approved by the Deptt.) in surface/ recessed PVC 2 mm thick	5.00	Metre
	conduit (Berlia/ AKG / Precision/ Presto Plast/Polycab/ MW or equivalent make as approved by the Deptt.) wiring system. With 4 x 10 sq. mm. + earth continuity with 2x16sq. mm. cable in 38 mm. dia. 2mm thick/ heavy rigid PVC IS: 9537 Part - III conduit.		
6	Supplying and fixing of batten holder (Anchor Penta PC Cherry/ Gold medal/Kolar kany.kom/Havells or equivalent as approved by the Deptt) including connection as approved by the Deptt. as required. (Without lamp).	42	Each
7	Supplying with fitting and fixing sheet steel, phosphatised, powder painted	1	Each
8	Supplying with fitting and fixing SPN 10 KA 240/415V 50Hz MCB of the following capacity complete with making necessary connection as approved, specified and directed by the deptt. B Series (Schneider MG, Legrand, Hager make) 16A	12	Each

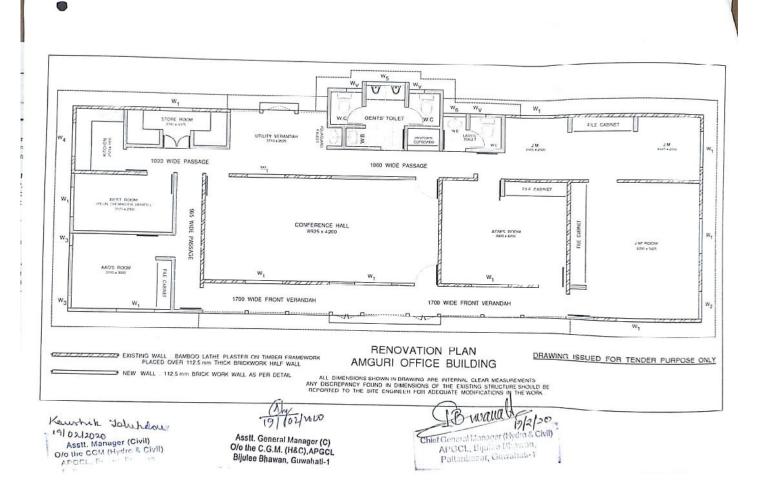
9	Supplying with fitting and fixing TPN 10 KA 240/415V 50Hz MCB of the following capacity complete with making necessary connection as approved, specified and directed by the deptt. C Series (ABB, Schneider MG, Legrand, Hager make) 63 A	1	Each		
10	Supply, installation & testing of G.I. Plate earth station with 600 mmx600 mmx6 mm heavy duty G.I. earth plate with necessary 40 mm dia. G.I. watering pipe with G.I. Fittings such as Socket, Tee, elbow, nipple and 50 mmx40 mm G.I. reducing socket for funnel including locking arrangement with 300 mmx300 mmx6 mm hinged cover C.I. cover plate complete with digging of earth pit, construction of brick chamber and plastering of both inner & outer surface of wall as specified and directed by the deptt.	1	Each		
11	Supplying, Fitting, Fixing Electronic fan regulator including complete connection	12	Each		
12	Supplying including fitting fixing of following A.C. Exhaust fan in the existing hole on the wall of following sweeps with making necessary connection as approved by the Deptt.) as required complete and as directed by the Department. Ventilator DX 150 mm sweep Louver type (ORIENT make)	5	Each		
13	Supplying including installation, connection as approved by the Deptt., testing and commissioning of CENTRIFUGAL MONOBLOCK PUMP SET complete as directed and specified by the deptt. 1 HP single phase monoblock pump set (Crompton Greaves/Aquatic/CRI/V-Guard/Calma make) with DOL Starter (Crompton Greaves/Control & switch gear/ BCH/ L&T/ Siemens make)	1	Each	TOTAL	
				TOTAL ©	

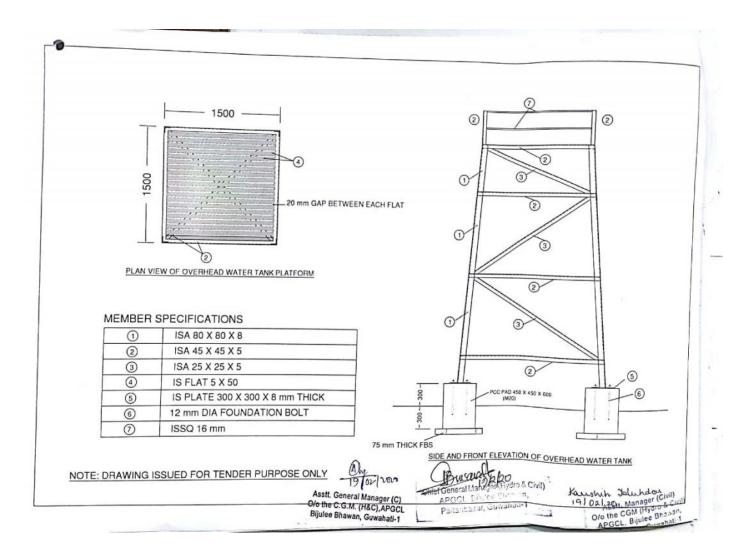
Enclose:		
1. Demand Draft No.	Yours faithfully,	
2. Date of issue	Signature of contractor	
	Full Name	
	Address:-	
3. Name of Bank	Mobile No:-	

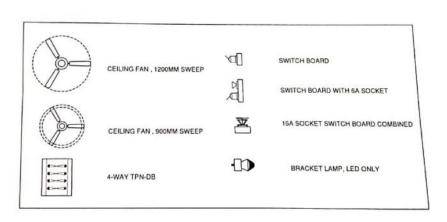
CHAPTER-IX

Drawings:

Dance of the







Manushah, Johnholan 19102) 20 Asstt. Manager (Civil) Olo the CGM (Hydro & Civil) APGCL. Bijulee Bhawan, Cottenbazar, Guwahati-1 Asstt. General Manager (C)
Olo the C.G.M. (H&C), APGCL
Bijulee Bhawan, Guwahati-1

Chief General Manager (Hydro & Civil)

APGCL, Bijulee Bhawan
Paltanbazar, Ghy-01

